

**HANFORD SITE TECHNOLOGY COORDINATION GROUP  
MANAGEMENT COUNCIL MEETING**

EESB Snoqualmie Room  
Wednesday, June 19, 1996  
8:30 a.m. - 12:30 p.m.

**I. INTRODUCTION**

Debbie Trader welcomed the group, introduced Carol Henry and Jeff Frey, and then asked for further introductions around the room. She informed the Management Council that Shannon Saget and Nancy Uziemblo were attending a National STCG Meeting in Rocky Flats. Then she stated that the purposes of this meeting were:

- to hear about near-term opportunities for:
  - n a workshop to identify long-term research to support Hanford technology needs
  - n future large-scale D&D demonstrations at Hanford
- to hear updates on current STCG initiatives.

**II. MEETING OUTCOMES**

Debbie stated that the outcomes of the meeting included:

- the STCG is prepared to participate in the Keystone Workshop,
- the STCG is informed of and prepared to review the D&D large-scale demonstration proposals in July, and
- the STCG is aware of the status of the Deployment Center, the Hanford Tanks Initiative, and the C-Reactor Cocooning Project.

The meeting agenda was reviewed.

**III. MEETING DECISIONS**

Does the STCG Management Council agree with the recommendation to submit one or more proposals to METC for additional large-scale demonstrations at Hanford, clearly specifying our concept of an Integrating Contractor Team?

#### **IV. KEYSTONE INITIATIVE**

Dr. Carol Henry summarized the Environmental Management Science Program (EMSP) and its role in developing a basic research agenda which maps site cleanup technology needs to basic science disciplines. Dr. Henry explained that Congress allocated \$50M from DOE's EM budget to the EMSP to fund basic research at the national labs and universities in a program to be managed by DOE's Office of Energy Research (ER). The money will disappear if visible progress is not made, thus the funds must be allocated this FY. 810 full proposals were received on May 10, and these were sorted into "must fund", "should fund", and "don't fund" categories. Martha Krebs (ER) and Clyde Frank (EM) must agree on the final set of proposals to be funded. An EM Science Advisory Board has been established to develop the FY97 program with guidance from the National Academy of Sciences.

ER and EM are sponsoring two workshops, one in Richland on June 27-28 and one in Savannah River on June 24-25. The workshops are to begin the dialogue between basic research scientists and DOE stakeholders and to assist in developing a targeted long-term research agenda for DOE's environmental management and restoration needs. The workshops will build on existing stakeholder involvement and will be organized and facilitated by the Keystone Center. All Hanford STCG members were invited to the Hanford workshop.

Al Alm's vision is that within 10 years, EM will complete cleanup at most nuclear sites. However, achieving this vision is extremely unlikely without the development of innovative new environmental technologies. The Galvin Commission Report stated that there is a particular need for long-term basic research in disciplines related to environmental cleanup. It is important to focus the nation's science infrastructure on national environmental problems. A targeted long-term basic research agenda would bridge the gap between fundamental research and needs-driven applied technology development. In addition, a science-based approach will likely result in reduced cleanup costs.

Ron Izatt wants the Hanford STCG to be involved in basic research. The \$50M has already been set aside, and we should be involved in determining how it is spent. This is Hanford's opportunity to affect what technology development is in the pipeline and to get our share of the research dollars focused on our Site's needs. This will leverage our EM funds and help to focus ER on Hanford needs. Also, the constituency for the ER budget is very strong in Congress. There was general support from the Management Council for participating in the Hanford workshop, but concerns were expressed regarding the short time frame.

Some Management Council members expressed concerns that all available funds should be spent on near-term cleanup needs rather than long-term basic research that will not have an impact for many years. Jerry White asked how we can be sure that the research would be completed in time to be of use to the sites. Tom Tebb asked if the EMSP would reduce the focus on our current cleanup efforts. Stakeholders want the Site cleaned up now! However, the EMSP funding is already set aside for basic

research, and we want to make sure that the scientists are focused on Hanford's needs.

## **V. DEPLOYMENT CENTER PROGRAM PLAN**

Debbie Trader presented the draft Hanford Technology Deployment Center flowchart and the draft Deployment Center Program Plan. These drafts were developed over the past few months by an ad hoc committee that includes the STCG Subgroup leads, the regulators, and representatives of DOE Procurement. Debbie walked through all the steps in the flowchart and described the process by which technologies will be demonstrated or deployed on Site.

Confirmation of available funding to demonstrate/deploy technologies is an important issue. The EM-30, -40, -50, and -60 Programs and the Deployment Center Project Manager must confirm that the required DOE and/or vendor funding is available prior to planning the demonstration. The availability of funding for actual deployment should be verified in advance so that if the demonstration is successful, the technology can be quickly deployed. The Programs and the Deployment Center Project Manager should pursue opportunities for cost-sharing among programs and/or sites whenever possible.

Protocols to streamline the procurement and regulatory processes for technology demonstration/deployment will be developed with STCG input.

Using the defined protocols, the Hanford Programs or the Deployment Center Project Manager will prepare a demonstration plan addressing regulatory, procurement, ES&H, labor, site services, and evaluation of results as appropriate for each planned demonstration. A procurement strategy will be developed from the protocol based on the status of the particular technology being demonstrated or deployed and the level of competition.

A screening process will be done by the STCG Subgroups to review proposed technologies for demonstration/deployment and confirm that the technologies have the potential to meet Hanford's needs. The Subgroups will use the established selection criteria to prioritize Hanford demonstration needs. The Deployment Center Project Manager will identify test-bed opportunities and use the Deployment Center protocol to select and prioritize unsolicited demonstrations.

The Program and/or the Deployment Center Project Manager will determine if a particular demonstration is a success. They will select the most successful technology for demonstrations that include multiple technologies in a "bake-off". Demonstration results will be published in an EM-50 "green book" format.

The Program Plan was distributed and Management Council members were requested to review it and send comments to Debbie by July 7.

## **VI. NEXT METC LARGE-SCALE DEMONSTRATION**

Jeff Frey summarized the METC call for additional large-scale demonstration proposals. The purpose of these demonstrations is to directly compare a suite of innovative technologies side by side with baseline technologies. METC's goal is to demonstrate solutions to 90% of the DOE Complex's D&D problems. Hanford has the opportunity to: 1) D&D a Hanford facility, 2) leverage Site funds with the EM-50 Program, and 3) deploy numerous D&D technologies at Hanford.

The types of facilities being considered for these proposals include:

- Laboratory facilities (hot cells, gloveboxes)
- Gaseous diffusion plants
- Tritium facilities
- Plutonium processing and handling facilities
- Highly-enriched uranium facilities
- Lithium processing facilities
- Fuel reprocessing facilities
- Weapons production and assembly facilities

Proposals are due to METC on July 29, 1996. Responses to this RFP should determine the next 5 large-scale demonstrations. All D&D Focus Area funds will be committed to the large-scale demonstrations from now until 1999. The focus envisions approximately \$5M per demonstration, lasting 18-24 months.

The criteria for winning one of these large-scale demonstrations are as follows:

- Significant Impact on:
  - n Skyline changes
  - n Cost reductions
  - n Time
  - n Safety and health
  - n Risk reduction
- Ability to demonstrate a suite of innovative technologies
- Conducted at a scale convincing to the potential users (size, contents, conditions)

- Managed by a D&D Integrating Contractor Team
- Costs shared by facility owner, the Focus Area, and the vendors

An Integrating Contractor Team will conduct and manage each large-scale demonstration project. The IC Team should consist of approximately 3 experienced D&D firms. METC stated that one of these firms will be the Adminstrating Contractor who "will not currently be under contract to Field Office (M&O, ERC)" and "will be responsible for deactivating or decommissioning the proposed surplus facility". The IC Team will: 1) coordinate and oversee the work of multiple subcontractors who own the innovative technologies, 2) evaluate the performance of innovative and baseline technologies, and 3) be able to use innovative technologies for work at other facilities.

The key issues from RL's perspective include: 1) the composition and role of the IC Team, 2) the PHMC transition, and 3) the need for Programs/Facilities to participate. The benefits of submitting a proposal include: 1) the ability to leverage funds to conduct planned D&D projects at Hanford, 2) a possible accelerated cleanup schedule, 3) experience/training using new technologies, 4) moving technologies from demonstration to deployment, 5) finding new solutions to meet our Site needs, 6) expanding private-sector involvement (Deployment Center), and 7) setting the model for similar facilities on Site.

The Management Council agreed that Hanford should take advantage of this opportunity. They asked RL to work with METC to better understand their expectation for an IC Team. Also, any proposals developed here should clearly specify Hanford's concept of an IC Team.

## **VII. UPDATE ON C-REACTOR COCOONING**

Greg Eidam, Project Manager of the C-Reactor Interim Safe-Storage Project, presented an update on the project status. A copy of Greg's presentation is available upon request. The C-Reactor Project, Hanford's first large-scale technology demonstration project to be funded by METC, is required to demonstrate at least 20 technologies. The successful technologies will find applications in major D&D activities that will take place across the DOE Complex in the future, as well as D&D of commercial nuclear reactors. The project will undertake full-scale technology demonstrations to perform actual D&D work on location at C-Reactor. The specific technology categories being addressed by demonstrations include:

- characterization
- decontamination
- dismantlement, segmentation, and demolition
- waste disposition (minimization, recycling, volume reduction)

- facility stabilization
- health and safety.

More information is available on Bechtel's Internet homepage, which can be accessed at the following address:

<http://www.erc.bhi.com>

## **VIII. UPDATE ON HANFORD TANKS INITIATIVE**

Bill Root presented an update of the Hanford Tanks Initiative (HTI), including a summary of the briefing given to Steve Cowan (EM-30) and Clyde Frank (EM-50) in May 1996. A copy of his presentation is available upon request.

HTI is mainly focused on retrieval and closure, but aspects of waste storage are also involved. The HTI results will be very useful for Phase II Privatization, where the vendors will have to retrieve hard heels from tanks. 131 tanks have hard heels that are similar to grout. Data is needed on retrieval technology efficiency and cost. The HTI team is linking Site baselines with the HTI schedule to make sure they get the data before it's needed. One key concern is what data is required to determine how to achieve closure.

There are three main HTI Project activities:

1. Define process/criteria. AX-104 will be used to establish regulatory and stakeholder accepted closure process and criteria four years ahead of schedule. This is being referred to as an "interim retrieval goal" rather than "closure". Ecology plans to make the first decision on tank farm closure in 2006.
2. TFA/ACTR cold retrieval and characterization demonstrations (integrate ACTR into HTI).
3. Develop retrieval specification (bid and award in FY97 for C-106 heel retrieval and readying the tank for closure). This will be a service contract for two vendors to actually retrieve waste from C-106. The plan is to ready C-106 for closure 2.5 years ahead of schedule.

HTI will build teams of national laboratories and industry to demonstrate technologies that will work in leaking tanks and to actually do the retrieval. The top two stakeholder values related to HTI are: 1) get results and 2) safety. Clyde Frank promised to contribute \$10M per year for four years to the HTI. Steve Cowan said EM-30 will pay the rest.

The Single-Shell Tank (SST) Closure Work Plan contains a description of all the issues/questions identified by DOE and the State. The two parties will be signing several Memoranda of Understanding (MOUs) related to percent retrieval requirements and other closure issues before October 1996.

## **IX. WRAP-UP**

The next meeting will be held on July 17, 1996, from 8:30 a.m. to 12:30 p.m. in the EESB Snoqualmie Room.

### Future Agenda Items

- Large-scale D&D demonstration proposals
- Presentation from program(s) on how they're meeting their technology needs
- Sitewide Systems Engineering
- Vote on STCG Communications Plan
- Any other high-priority items

### Action Items

- Review/comments on Deployment Center Program Plan by July 7, 1996.
- Better define funding confirmation step in Deployment Center Program Plan.

### List of Handouts

- STCG Meeting Package
- Mixed Waste Subgroup Highlights for June 1996
- Highlights of the 6/5/96 Plumes/Landfills Subgroup meeting
- Mixed Waste Focus Area response letter from Julie Conner regarding Hanford's mixed waste technology needs
- STCG Tank Subgroup Meeting Minutes for June 1996
- STCG D&D Subgroup Meeting Minutes for June 1996
- Evaluation Feedback Results for May 15 STCG Meeting
- Efficient Separations and Processing Crosscutting Program FY 1997 Technology Needs Call for Proposals
- Memorandum for R.D. Izatt regarding Hanford Technology Needs -- Decontamination and Decommissioning Focus Area

- Memorandum regarding Initiatives to Promote Innovative Technology in Waste Management Programs
- Hanford Technology Deployment Center Program Plan (Draft)
- Memorandum regarding Request for Proposals -- Large-Scale D&D Demonstration Projects
- STCG Flow Chart including Hanford Technology Deployment Center
- Flow Chart: Hanford Technology Deployment Center Involvement in and Support to Technology Demonstration and Deployment
- Hanford Tanks Initiative
- Hanford Technology Deployment Center Participants List